FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

l	OMB APPRO	VAL								
	OMB Number:	3235-0287								
l	Estimated average burden									
l	hours per response:	0.5								

	Check this box if no longer subject to
\neg	Section 16. Form 4 or Form 5
_	obligations may continue. See
	Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name an Westph		2. Issuer Name and Ticker or Trading Symbol Flex Pharma, Inc. [FLKS]									Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director X 10% Owner								
(Last) (First) (Middle) C/O FLEX PHARMA, INC. 800 BOYLSTON STREET						3. Date of Earliest Transaction (Month/Day/Year) 10/05/2015								X Officer (give title below) Other (specify below) President and CEO					
(Street) BOSTON MA 02199 (City) (State) (Zip)					- 4. li	4. If Amendment, Date of Original Filed (Month/Day/Year)								Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person					
Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned																			
1. Title of Security (Instr. 3) 2. Transaction Date (Month/Day/Ye						2A. Deemed Execution Date, ear) if any			3.		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 an			5. Amount of Securities Beneficially Owned Foll		es ially Following	Form (D) o	n: Direct	7. Nature of Indirect Beneficial Ownership
									Code	v	Amount	(A) or (D)	Price		Reporte Transac (Instr. 3	tion(s)			(Instr. 4)
Common Stock 10/05/201							15			П	868	A	\$12.48	802 3,91		15,603		D	
Common Stock															2,69	97,264		I	By Longwood Fund II. L.P. ⁽²⁾
		Та	ble II								oosed of, convertib				wned				
1. Title of Derivative Security (Instr. 3)	rative Conversion Date Execution Date, if any				4. Transa Code (8)		of Deriv Secu Acqu (A) or Dispo of (D) (Instr	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		te Exer ation D th/Day/		7. Title and Amount of Securities Underlying Derivative Security (Instr. and 4)		Dei	Price of erivative ecurity estr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4)	у	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
	Code		Code	v	(A)	(D)	Date Exerc	isable	Expiration Date	Title	or Number of Shares								

Explanation of Responses:

2. Longwood Fund II GP, LLC is the ultimate General Partner of Longwood Fund II, L.P. Christoph Westphal, M.D., Ph.D., Richard Aldrich and Michelle Dipp, M.D., Ph.D. (collectively, the "Managers") are managers of Longwood Fund II GP, LLC, and, as such, may be deemed to have shared voting and dispositive power with respect to the issuer's securities held by Longwood Fund II, L.P. (the "Longwood Shares"). Each of the Managers disclaims beneficial ownership of the Longwood Shares, except to the extent of their respective pecuniary interest therein, and the inclusion of these shares in this report shall not be deemed an admission of beneficial ownership of the shares for purposes of Section 16 or for any other purpose.

Remarks:

/s/ Robert Hadfield, Attorneyin-Fact 10/06/2015

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

 $^{1. \} The purchase \ reported in this Form \ 4 \ was \ effected \ pursuant \ to \ a \ Rule \ 10b5-1 \ trading \ plan \ adopted \ on \ February \ 17, \ 2015.$